

Notice of Allowability

Application No.

10/603,597

Examiner

Fadi H. Dahbour

Applicant(s)

FAUPEL ET AL.

Art Unit

3743

LD

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 1/13/05.
2. ☒ The allowed claim(s) is/are 1,4,7-19 and 22-51.
3. ☒ The drawings filed on 26 June 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

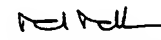
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 10/15/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


Fadi H. Dahbour
Examiner
Art Unit 3743

Allowable Subject Matter

1. The Examiner acknowledges Applicant's submission of the amendment filed on 1/13/05.
2. The allowed claims are 1, 4, 7-19, 22-51.
3. The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or fairly suggest the recitations of the specific features of the method and system in claims 1, 7, 12, 13, 15, 16, 19, 24, 29, 32, 36, 37, including especially the following:

The primary reason for the allowance of independent claim 1, is the inclusion of determining a condition of the target tissue based on the combined biochemical and morphological measurements, wherein the biochemical spectroscopic method comprises at least one of fluorescence, time resolved fluorescence, or fluorescence anisotropy, and the morphological spectroscopic method comprises at least one of absorption, reflectance, or polarized reflectance.

The primary reason for the allowance of independent claim 7, is the inclusion of determining a condition of the target tissue based on the combined determined characteristics, thereby decoupling and detecting biochemical changes and morphological changes, wherein the sensing comprises sensing electromagnetic radiation emitted from the target tissue in response to the excitation electromagnetic radiation and then subsequently sensing excitation electromagnetic radiation that is scattered from the target tissue.

The primary reason for the allowance of independent claim 12, is the inclusion of identifying visual characteristics of the target tissue, and dividing the target tissue into a first set of field areas, wherein the field areas are selected based on the identified visual characteristics of the target tissue.

The primary reason for the allowance of independent claim 13, is the inclusion of dividing the target tissue into a first set of field areas, wherein the field areas are selected based upon previously identified characteristics of the target tissue.

The primary reason for the allowance of independent claim 15, is the inclusion of re-dividing the target tissue into a second set of field areas different from the first, and the determining characteristics of the returned electromagnetic radiation in each of the second set of field areas using at least two spectroscopic methods, combining the determined characteristics, and determining a condition of the target tissue by comparing the combined determined characteristics of each of the second set of field areas.

The primary reason for the allowance of independent claim 16, is the inclusion of the apparatus comprising an irradiation source, a detector and processor, and sensing electromagnetic radiation returned from the target tissue from a first subset of a plurality of interrogation points, moving at least one of the apparatus and tissue, sensing electromagnetic radiation returned from the target tissue from a second subset of the plurality of interrogation points, again moving at least one of the apparatus and tissue, and continuing until sensing has been performed at all of the interrogation points.

The primary reason for the allowance of independent claim 19, is the inclusion of at least one biochemical and one morphological spectroscopic methods, wherein the biochemical spectroscopic method comprises at least one of fluorescence, time resolved fluorescence, or fluorescence anisotropy, and the morphological spectroscopic method comprises at least one of absorption, reflectance, or polarized reflectance.

The primary reason for the allowance of independent claim 24, is the inclusion of the device that senses electromagnetic radiation being configured to first sense fluorescent radiation emitted by fluorophores in response to the excitation radiation, and then subsequently sense excitation electromagnetic radiation that is scattered from the target tissue.

The primary reason for the allowance of independent claim 29, is the inclusion of dividing the target tissue into a first set of field areas, wherein the target tissue is divided into field areas according to previously identified characteristics of the target tissue.

The primary reason for the allowance of independent claim 32, is the inclusion of dividing the target tissue into a second set of field areas different from the first, and determining characteristics of the returned electromagnetic radiation in each of the second set of field areas using the at least two spectroscopic methods, and combining the determined characteristics, and determining a condition of the target tissue in each of the second set of field areas based on the combined determined characteristics of the respective field areas.

The primary reason for the allowance of independent claim 36, is the inclusion of the first spectroscopic method comprising at least one of fluorescence, time resolved fluorescence, or fluorescence anisotropy, and the second spectroscopic method comprises at least one of absorption, reflectance, or polarized reflectance.

The primary reason for the allowance of independent claim 37, is the inclusion of the first spectroscopic method comprising at least one of fluorescence, time resolved fluorescence, or fluorescence anisotropy, and the second spectroscopic method comprises at least one of absorption, reflectance, or polarized reflectance.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fadi H. Dahbour whose telephone number is 571-272-4792. The examiner can normally be reached on M-F, 9am-5:30pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry A. Bennett, can be reached on (571) 272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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